

Field Journal

South West

No 1.

AR Boney  
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Victoria  
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Melb. 3000

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Mr. Boney 059 741 399

Carlson 059 821 333

Field Journal

South West No 1.

# Christian & Perry

Stratification, height & density

A = Tree Layer

B = Shrub Layer

C = Ground Layer

[Lr. = Litter]

[M = Mallee]

} Stratification

Height - In metres, feet or inches.

Note: Beginning with this note-book height will be given in metres.

1 ft = <del>0.30</del> m. (Ca.)	12 ft = 3.6 m.	1 metre = 3 ft. 3.3 inches
2 = .6 m.	15 = 4.5 m.	
3 = .91 m. (.9 m.)	20 = 6.0 "	6 ins = 15.2 cms = .15 m.
4 = 1.2 m	25 = 7.6 "	
5 = 1.5 m	30 = 9.1 "	9 ins = 22.8 cms = .22 m.
6 = 1.82 m	35 = 10.6 "	
7 = 2.13 m	40 = 12.1 "	
8 = 2.43 m.	50 = 15.2	
9 = 2.74 m	60 = 18.2	
10 = 3.04 m.	70 = 21.3	
	80 = 24.3	
	90 = 27.4	
	100 = 30.4	

Density: X = dense XX = very dense  
Y = mid. dense  
Z = sparse ZZ = very sparse

A  $\frac{12}{Y}$  B  $\frac{3.6}{X}$  C  $\frac{.22}{Y}$

Map the Regions  
at back

Vegetation Type  
Survey

S.W. Region - Victoria

With Bill Middleton  
June 1974

June 2nd Sunday

1505 Depart Vahyke  
for Dumbarton

Fine clear.

Petrol Beaupre

7 galls 4 dollars

Arrive Dumbarton

20.30 - 20.45 - 6

Bill & Joan's for

dinner & the night

Planning to start tomorrow  
morning

<sup>1000</sup>  
June 25 0730 up

Finches

0930 Sitting up for  
Edenhope - Bill Murray

Went overa flocks  
up to 30 P. acuminatus

Red b. Parrot

Alouatta carolina

singing - Bill says

here for past 3 years

Miconia leucophylla ?

Myzomela malincheana 1

Gymnophanes hypoleuca Lateral

(clear white - backs)

~~Agelaius~~ ~~type~~ : Linn. has  
something of density

+ True structure may

supply answer.

Falco burgula Dk phase 2

Corvus prob. molitor - flock

Falco cenchroides 1-2.

Film 1 Menella →

3

Film 1 Exakta →

Florus notatus 2 Gravel

Nabinnuk 10-30

Oxyphaps Aphids 2-3.

Kerkela rosicapilla black

Centru noveboracensis

12 50 Int. - like

11.05 Tilpangor : PF  
(minutella)

Film 1 Photo 1 'Shrub -

Woodland = Low Shrubby

Woodland?? Brown thorny

Banksia ornata &

marginita, 'astroloma

Photo 2 ditto

A 7-5 12 3  
X B Y C Z

Film 1 (Exakta)

Photo 1: ditto

Photo 2: ditto

Telpungu Prop.  
 polih dense will  
~~enough~~ for photo  
 in future

Dacelo gregis 1, 3

E. 1. Muntia Photo 3 - Swampy  
 Woodland Red gum &  
 black box preparation  
 Photo 4 photo

Poseum linear grey-ant 7

Ara superbiosa 1

Photo 5 & 6. Buloke woodland

A <sup>10</sup> y B <sup>5-7</sup> ZZ C <sup>7</sup> 1-13

Lobelia n-hall. 1. - ~~herbarium~~  
 several

Arden n-hall. 1. 4/

Photo 7 & 8 E. alluv. Red  
Gum Habitat



~~Cassidix~~  
Tadorna cornuta 1 pr

Kohare galena Hock  
Kestrel leucostictus 1  
12:00 E Edenhope

Patrol Outbox 8:35

counter lunch 8:30 max  
Small breakfast.

12:55 Depart Edenhope - now  
— S of Region —  
heading S. W.

Tested microclimate: Ferry  
Woodlands. ~~the~~ Shrub  
woodlands with ~~pasture~~  
for shrub layer

F1 minutia

Photos 9 & 10 Ferry Woodlands  
Br. Shrubland

A<sup>10</sup> B<sup>2m</sup><sub>22</sub> B'<sub>xx</sub>

B' = broken.

Photos 11-12. Swamp  
Woodlands & dense  
rush layer  
Red gum.

*Porphyrio melanotos*  
 up to 20-20

*Halcyon sphenurus* 1  
 some light brown feathers

*Kuhlia unicolor* 2  
 13-35 *Poecetes*

*Egymna hypoleuca*  
 common

Turning left to Bantley  
 Rocks Desert

Photos 13-14 - on way to

Bantley Rocks

X *Xanthochloa flutellus*  
 near Woodland

*Brachypteryx*

$A^{10} B^{1.6} = B^{XX} C^{2.2} B' = Xanthochloa$

X what about healthy  
 woodland?

Photos 15 & 16

Shrubby Woodland?

yellow green & warm  
 shrub *Leptocarpus*  
*Hakea* 2000

$A \begin{matrix} 12 \\ 7 \end{matrix} B \begin{matrix} 2 \\ 22 \end{matrix} C \begin{matrix} 1 \\ 3 \\ 7 \end{matrix}$

$B^2 = \text{Little chicks}$

Barky's Rock = rocky  
 outcrops - green granite.  
 - forest floor residue

Photos 17-18 Rocky  
 moss covered  
 outcrops & boulders  
 greenish - very  
 alpine

photos  
 18-19 Bill + tail  
 19-20

Vegetation very different  
 mixed woodland -  
 young maples, shrubs  
 - ~~low~~ Liriodendron, Sumac  
 Sassafras

Turkey Vulture 1  
 Scarlet Plover 1

21 22  
 Photo ~~20~~ - ~~21~~

On way out from Berkeley  
 Road - "Hanky"  
 roadblock

Be. Strongyloche

A<sup>12</sup> B<sup>1-1.5</sup> C<sup>13</sup>  
 A Z B X X C X

B<sup>1-1.5</sup> = *Leptoporum*  
*melaleuca*, *Bombus*  
*leucopogon*, *Pastinaca*,  
*Silene*, *Aster*,  
 ( *humifusa* )

Crowded and over  
 head

21 22  
 Photos ~~22~~ - ~~23~~ 23-24

Dense  
 Tall Scrub

Small area

15-40 *Pentstemon*

Common to *Hypericum*  
 here

12 *Quercus* - *macrocarpa*  
 in present. ~~photo~~

Extensive woodland  
- varying shrub layer  
- poor soil -  
Bill says the extensive  
"shrubby woodland".  
Crossed Eucalypt  
hill & Douglas Hardly  
to ground.

Extensive shrubby shrubby  
woodland  
Photo ~~23-24~~ 25-26.  
Habenaria Hyperborea  
Leptopogon  
Asterina, Solms  
Cassiope (Heathland)  
Asterina - Natives  
- "Heathland" - climes??  
Probably natural  
Height up to 1 metre

3  
Several such natural?  
climaxes etc.  
Extensive ferny  
woodland (bracken)

~~25-26~~Photos ~~26~~ ~~27~~ 27-28

Note the main forest

— densely but  
 still woody  
 structure

 $A^{15} \quad B^{3-5} \quad B^2 \quad B^1 \quad C^{13}$   
~~A~~  $\pi_z$   $B_z$   $B'_x$   $C_z$ 
 $A^{15} = B$  - Strychnine $A^{3-5} = D$  - Aquatic $B^2 =$  Hydrophobic $B^1 =$  Benches $C^{13} =$  Heterocyclic plus other

They tend to be open-forest  
 — densely but ferny-  
 woody — tree structure

Small W. Valley on Kangaroo

~~27-28~~Photos ~~28~~ ~~29~~ 29-30

Probably more scrub

Heavier - vertical

Note the switch we are in  
 illustrates a basic problem  
 This dense enough  
 to convey concept of  
 "forest" but more  
 "woodland" structure  
 Should we choose a  
 less predominant  
 impression?

Coming into Haven - like  
 country - red green  
 country - not stringy bark  
 Photos ~~30-31~~ 31-32  
 Red Sun Every Tree  
 Lovers' rock

thick ash tree sphinxes 2  
 Red - royal forest - 2  
 Lovers' enigma call  
 Note what happens to  
 the Lovers' etc

16-15 Neville McDonald  
at Nansen

16:35 Colburne - all  
unusually good  
on Loberg  
for woodwork

16.40 Litty owl for  
Hamilton house  
Savannah at Sun  
Kiloma advances 2  
chickens fine examples  
T-park. like Savannah  
woodwork on  
Colburne - Hamilton  
grove. But to photograph  
these later

Arrived Wainwright  
~~Hotel~~ Motel Colburne  
ca 17.30.

Now at 19.30 after dinner  
sitting down to look off  
literature on the problems.



At this stage it seems:-

- a Specht's work provides  
good basis
- b Contrary to past practice  
(where measures concerned)  
we should begin with  
filing water bulkhead  
structure
- c Normally the appropriate  
structure will accompany  
the fact
- d Sometimes it won't —  
where case a decision  
has to be made as to  
whether to think of Specht  
in terms of forest or  
marshland
- e Whatever provides the  
dominant impression  
might provide the  
answer to (d) above
- f Specht — concerned  
in his classification  
with the life form and  
height of the tallest

Stratum - but he omits  
 "True Savannah etc"  
 & in the case the  
 latest stratum is  
 not the most important  
 part but merely a  
 proctor helping  
 locate the  
 Savannah characteristic  
 & ~~proctor~~ the  
~~affairs~~ establish  
 the fact whether  
 the orig. type is a  
 "true" Savannah  
 or "Straw" Savannah  
 etc. It is a necessary  
 part of the Savannah  
 concept but the fact  
 that it is the latest  
 Stratum does not  
 invest it with a special  
 significance. It is the  
result of the presence of  
 grass & the presence of  
~~grass~~ in the culture

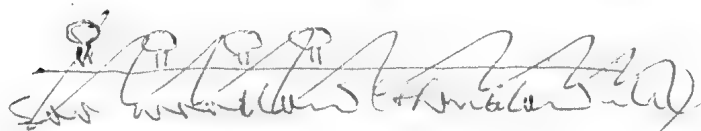
Trees or Shrubs don't  
 = the signification thing  
 i.e. the idea of "Savannah"  
 is a clearing  
 between other things;  
 the savannah concept  
 = the thing being  
 disturbed.

An alternative idea  
 would be to have  
 long grasses on  
 the scattered trees  
 or shrubs etc. dense,  
 and to speak of these  
 as "Sparse trees"  
 or "Sparse shrubs"  
 but these could occur  
 over farmland or  
 grassland & it is still  
 not enough to speak  
 of the trees only.

Sand  
Rock

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Grassland (Barrenland, etc.)



Tree (shrub) savanna



Savanna (shrubland, etc.)



Open forest



Closed forest

It seems that Speth  
objecting to the term  
"Savanna"  
means the tree/  
shrub savanna  
concept

End of Minolta Film 1.  
Beginning Minolta Film No 2

17

June 4<sup>th</sup> Tues.

0700 up. Coal closed.

0830 Depart. Hotel B/O.

To Castleton

Chiefly open cleared

grazing land - occasional

Red Gum saw Northland

Photos <sup>31</sup>32-33 ~~32~~ <sup>33</sup>33-34 ~~34~~ <sup>35</sup>35

Grassy Tan soil over

Woodland

Kakara rosecapita 2

Beginning Minolta  
Film No 2.

Beautiful Nestled Brown Hawk  
country but no sign

1 Falco <sup>(dark)</sup> burgoni on wire

0905 Castleton

Petrol 7 galls

0920 Setting off for Southdown

F2. Photos 1 & 2

Fairy woodland

few miles S of Castleton  
on Glenelg highway.

Dense light bush

Scattered Bark Chambers

15 2-3  
 A 2 B ~~zzz~~ B'  $\frac{.3}{2}$   
 xx

B' = Bracken

Little Woodland 1  
 Grey Stone House early  
 Birch Wood - inner (hall)  
 Brown House pole  
 Meggie dock & 1.

Photo 3 & 4

Xanthoxen shrubby overland  
 Grass Tree preserved  
 Foreground patches =  
 blue "heath" type  
 vegetation

Photo 5 & 6

Heathland

Closer view of the  
 "heath" layer - Heathland  
 Astragalus, Xanthoxen  
 species, Banksia ~~marginata~~  
 Leptospermum - Hypoleuca  
 Teucrium, Ribes  
 Sapotaceae

0950 turning left from Elmdale  
highway + towards Wilson  
School

Photos 7 & 8 Red Gum

Open forest? (Tall Woodland)

A<sup>18</sup> B<sup>25</sup> C<sup>3</sup>  
A y B 22 C x x

A = Red Gum

B = Xanthorrhoea (paperbark)

C = grass + herbs (grey & red)

Photos 9 & 10 auto

Note importance of  
explaining why called  
"open" when it looks  
dense. Comparison  
is with tropical forest.

Photos 11 & 12

Similar habitat showing  
some ~~more~~ structural  
stage

Pinnen multicolor 8,  
 Dark grey 1  
 Heliosciophila 1  
 Trench just inside  
 on left

Photos 13 + 14. Dark  
 Trench Dark house  
 Trench = low bay  
 for acacias = also  
 some wood on one  
 almost

Calcephalon pumilius 3 Bull

Photos 15 + 16

Swampy bank & young  
 just inside

Liptospermum, Trench,  
 Mulberry

(Not ~~water~~ spread  
 community. -)

Sheep (like gracilis)

whole on wing  
 2



Pine forest

~~Forest~~

Black wrens to drift, then  
to Silently River

Photo 17 + 18

Red Gum Swamp  
woodland along

Silently River

Photo 19 + 20 ditto

Rush swamp. *Zoysia*  
*Megalurus grammurus*  
caerulescens

Photo 21 + 22. Rush (Rush)  
Marsh

Emu 2.

Forstailed Cuckoo 1

Shelduck 2

*Thalassidroma melanura* several

*Cygnus atris* - black.

*Helimantopus* 2

22

T-ho 23+24

Shrubby Open Woodlands

A<sup>15</sup> 3-6 B<sup>1-2</sup> C<sup>13</sup>  
A Z A Z B X C Y

A<sup>15</sup> = *Swampy* to *open*

A<sup>3-6</sup> " "

B. *Leptospermum*

C. *Scirpus*  
*Sesuvium*

Yellow-winged Warblers  
several

White-winged ~~Swampy~~ <sup>common</sup>

Swampy (Bell) 3-4

(Not warm planks)  
(1 series)

fibrous in the water /  
steppe - black wings /

Gilliesie Cull - late  
19th century - probably  
collected - 1 cabinet

eggs - date possibly 1844  
Lewney Hills - Bull

to arrange it

Photo → 25-26

Open Shrubby woodland  
- Red-brown & brown con.  
- gully - to show  
what it is like in a  
gully. Complex

Calyptorhynchus fasciatus

~~Scrub~~ - flocky ca 40 feeding on  
pine cones

Colinus harrisi a callig.

Chondestes leucophrys 1

Melospiza cinerea 1

1200 Containing brown

Dark brown - small brown 1 pack  
Red-brown. Fruit

1219 - Dark brown

March 8/100 - 84 Be

1255 on Departing for Nelson

Maypole link 1

Photos 27-28

Early open forest.

Open forest mid-dense

For Shingybank

A-18 5 B<sup>1</sup> .3  
Y AZ B<sub>X</sub> C Y

A 18 = Shingybank  
A 5 = Beavert  
B<sup>1</sup> = Breckon

Photos taken just east of  
Bardonia

13-20 Slopped at cliffs  
in Glenelg. Herbs  
down on forest -  
mod dense. Shrubland  
nearby Dark Dark

Photos 29-30

Shrubby woodland  
with shrub component  
pioneer height but  
thinks regrowth of  
trees do not have  
pioneer character  
layers of the northern  
tropical woodland.

A<sup>18</sup> A<sup>6</sup> B<sup>2-3</sup> B<sup>1</sup> C<sup>3-5</sup>  
Z Z Y X X

A<sup>18</sup> Shrubland

A<sup>6</sup> Grass + regrowth

B<sup>2-3</sup> (Casuarina)

Ulychno  
Muhlenbergia  
Leptocarpus

B

Bracon

C = Shrubland  
Sediment  
Photos

Roughed up photos 29-30  
 = to show how Shrubby  
 woodland can be ~~thick~~  
 dense & show varying  
 "layers" that are not distinct  
 layers

Gold whistler heard 1

Grey Fantail 1 (Bul)

1350 Shrub pKirkland  
 plantation

Photos 31-32

Bulky Ranges Park

Shrubby Woodland with  
 shrubs very pronounced  
 release = *Acacia*  
*Sophora*

Note must explain (check)  
 that 100% cover would  
 prevent no light through  
 - even one of these trees  
 under itself only gives  
 50% cover - so much light  
 coming through.

26 End | Minolta F2.  
Begin | | | F3

Photos 33-34

~~20 p.p.g.~~  
Acacia / Sophora  
Serub

Melampus cyaneus Pl.  
Chromolaena amplexicaulis

Photo 35 End p.p.g.  
Shrubby Woodland

Minolta Film NO 3 begins

Photos 1 & 2 Acacia Serub

Ac. Sophora  
~~Acacia / Sophora~~ in p.p.g.

Exakta Film 1

Photos 3 & 4

Shrubby Woodland

1540 Nelson

Dense L. Coast

Minolta

Photos 3 & 4

Coastal Serub

Coastal Bandit (Sophora)

& Acacia Sophora (Coastal)

Photos 5 & 6

Coastal scrub with  
background dunes showing  
mixed scrub & dune  
grass - mixed ferns  
- mainly ~~cop~~  
composite grass &  
coast wattle

Photos 7 & 8.

"Sapphire" Beadlet  
Glen wattle.

Photos 9 & 10

Little closer range

Photos 11 & 12

Again coastal dune  
scrub as 3 & 4 & 5 & 6

Meliphaea iridescens

Ardea maculosa 1

Photos 13 + 14

Juncus after next to  
 Lophocarpus producing  
 tiny rush marsh

Photos 15 + 16

X "Swamp" Scrub  
 Lophospermum  
 Linogonium?  
 (Huraeae?)

Melolobos squarrosa

Cauline like ~~and~~ sedge

Dense growth -

low lying wet

~~all~~ hollow basal

root. Scrub structure

in "Swamp" site

Very dense, ~~on~~ Depth 2-3 m.  
 Some have been  
 burnt.

Note just as "When

— does scrub become  
 scrub?" so

what does scrub  
 in Swamp site  
 become?



Photos 17 & 18

Scrub - same composition  
as 15 & 16 but not  
in quite as well location

Photos 19 & 20

Scrub - same composition  
as above but showing  
better development - has  
not been burned or so  
appears by now. The  
one includes Mel.

*Liquarosa* etc as others

1535 Travelling towards

Portland

Slips woods for roadside  
or woodland belt.

Roadside? plantation?

Went into dense pine

Forest - 7-8 years old

For Threnhall - behind head

Scrub like behind head

Gold-whisker -

Song Thrush head

Cyanus head

Goldfinch. See

Alnus multipl.

30.

X Holm-er - densest  
part looking up should  
at least 30% sky.

To be closed has to  
be very dense -  
100% thickly  
wants exclude all  
direct light. (2 figs  
next a lantern for light-  
watching you have  
closed ~~in forest~~!!)

16:25 Newbury Park  
Turned towards Mt Richmond!

- ~~unusually~~ -  
pinkish red-brown trunk  
on root up to 20

various Rosella 1

2 in Mt Richmond Nat Park

Photo 21 22

X Low woodlands -  
rather water-like -  
~~not~~ (unnatural)

Swarrip Lums. Natural  
water - structure - many  
then a problem

2nd Hawk light phase /  
~~Return~~ now to  
 Portlans from Mt.  
 Park.

17-30 To Lushan Mt

June 5<sup>th</sup> Wed

0645 Up. - clear, fresh

0830. Left out for Cape Nelson

Simi - Maile & Port Maile  
 as a term for trees where  
 some show Maile structure.

Plant Specimens

No 1 *Callocephalus brownii*  
 Cushion Bush  
 Cape Nelson Sand Island

No 2 white

No 3 *Leucopogon*  
*pinnatifidus*  
 Coastal Band Bush

No 4 dub

No 5 *Alcorno*  
*axillaris*  
 Coast Daisy Bush

*Mitrospiza wissoni* 1  
*Dasyornis brookbanki* 1-2  
*Melospiza new-hill* 1  
*Chloris chloris* 1 Bell  
*Carduelis carduelis* 1-4.  
*Anthracoceros chrysops* 1 each  
*Colinus pectoratus* 1 each  
*Turdus maculosa* 1-2

Photos 23-24

Dune scrub. Cuckoo  
 Bush Coast Bush  
 Heath, Coast Daisy Bush

Sp Cuckoo  
 Bush  
 Heath

Photos 25-26

Scrub.

*Eucalyptus diversifolia*  
*Mitrospiza brookbanki*  
 Coast Heath  
 Coast Bush Heath

Note *Eremophila* - mallee  
form builds mounds  
with the scrub.

Photo 27 Moorah Scrub  
*Maireana laevis*

Photo 28 Exposed  
moorah scrub.

Photo 29 *E. densifolia*  
showing mallee base.

Photo 30 Base of *E. densifolia*

Photos 31-32 *E. densifolia*  
showing slender ~~woody~~  
whipstick character  
scrub.

*Alauda arvensis* singing

Photos 33 34 Base of *E. densifolia*  
to show mallee structure

Photos 35-36 - antelope  
example  
Endommata hole No 3

34 Beginning Minutella film  
N/D 4.

Photos 1-2 E. diversifolia  
showing wattle structure

Photos 3-4 E. diversifolia  
showing cartilagineous -  
blue clump.

Photos 5-6 cutto slightly  
longer clump.

10.05 Bush to Portulaca  
Bright sandstone color  
+ blue 36C, 22C, + 30C = 88C

Note Dense Cypress has  
thrust not try to treat  
the sample larger  
they become  
longer they would not  
exist a 1/4 of cut  
it would be forest -  
density but not  
forest - structure?

better base for  
 much like  
 - plankton etc

Falco longirostris having  
 some line 1. and  
 when

Photos 7 & 8  
 Juveniles →  
 from Tuzovsk  
 grassland

Photos 9-10  
 Tuzovsk grassland  
 mixed with some  
 grass with some  
 juveniles.

Photos 11-12  
 Coastal Shrubland  
 (where continuous =  
 scrub?)  
 Linxporon  
 Box Thorn  
 Hebe saphora  
 west of Bush

Phytos 13-14

Same area  
showing broken  
vegetation = Shrubland  
becoming a bushy  
scrub (unbroken)  
- Unnaethik

Cullumicula 1

Meliphaga novae 2



Bills  
legs  
Crest  
back  
Wings  
feet -  
perches

ca 14 Red Olyas

colours & leaves

Haemaphysalis ostralegus

Phytos 15-16

Casuarina

Woodland

Casuarina stricta



Etiopis - 1

Thinks 17-18

Casuarina stricta  
woodland - possibly  
plantation.

Alnus arvensis - damp  
Coll. harmonica 1

Aemulogonophora 7-12

very small shells

Pteridium aquilinum several

Plant/Sp. No 6:

Casuarina stricta

Roadside

Erigeron annuus 7

200 - 2m Int. Breckwood  
Nat Park

Note Box Strongyloids

can be 1/1 mallee

like structure but says -  
names for woodland ~~forest~~  
forest for lakes, many

be result of fishing  
 suggest we must  
 draw attention to the  
 different points

Photo 19-20

Br Shampark N/S  
 showing water form  
 but might even  
 be there sep. seashore  
 - can't really say

Photo 21-22.

Shrubby Woodland  
 Sep. shots

$A^b$   $B^{1.5-2.5}$   $B^1$   $C^{.3}$   
 $A^2$   $B^2$   $B^y$   $C^y$

$A^b$  = Br Shampark

$B^{1.5}$  = ~~low vegetation~~  
~~low vegetation~~

$B^1$  = Xanthoxanth  
~~border~~

$C$  = ~~dark vegetation~~

Exaltia Fl. photos 546

Shrubby ~~climber~~ <sup>as P38</sup>  
Same shot diff. angle  
Mulleberry - *brevifolia* Lindl

12-30 stopped for lunch

Photos 23-24 (Mammals)

Low Shrubby Woodlands  
(Xanthoxylum large)  
Berberis *berberis* L.

13. 10 morning

Photos 25 - 26 -

Swampy Ground <sup>not Richmond</sup>  
Disturbed Mulleberry Forest

Photo 27-28

Little - diff. champ.

13-20 Getting out for Kentonville  
Hunt.

Photos 29-30

Seen at Bank

Peppermint

Woodland - what  
would have been  
called Tall Woodland  
Southern Yellow Rubber ?  
(Bul)

13.45 (82.7) Waning  
moon - Weymouth Swamp  
road to Heathens  
Immediately after  
Ferry Forest.

Photos 31-32

X Open forest

X N/B

A<sup>21-24</sup> A<sup>10</sup> B<sup>1-1.5</sup> C<sup>.3</sup>  
⑦ Z y y

A.21-24 - Seen at Bank Peppermint  
Stronghold

A<sup>10</sup> signpost

B. : Bonbard  
Heath  
Xenodochia

C Heath, grasses

Seen at  
p41

Note: The forest is  
 more open than 30%  
 ∴ not forest - but  
 the point is it has been  
 affected by logging -  
 it has made it open.

The point is the trees  
 would not have assumed  
 forest form if they all  
 height & shape if they  
 had not been growing  
 close together. So  
 what is here is really  
 the remains of forest  
 - now presenting density  
 or rather lack of it that  
 belongs to woodland  
 formation - but it  
 still has the feeling  
 & characteristics of  
 forest & should not be  
 called woodland - but  
 in calling it forest

~~giving~~ one side has  
 to give ~~it~~<sup>it</sup> a formal  
 a density based  
 on stumps as  
 well as trees or  
 on trees only as they are  
 now which would  
 give a woodland density  
 not a forest one.  
 Logged cut forest  
 explain the sketch.

Photo 33-34

Open Forest - ~~regrowth~~  
 - showing the density  
 that ~~would~~ occur  
 in the earlier stages  
 Regeneration.

Promissio nov. hall. 2-

Antthruck/Hackland

1435 - Have covered - have  
 been asleep - Bills  
 covered have under  
 his own station.

Entom. Minut. Film No. 43  
Begin Feb. 1905 7.

Photos 35-36-37

Flora - Cassinia  
Habenaria leptocarpa  
mollisima Bonanza  
Swampy, Hypoxis  
Minut. Film No. 5 in press

Photos 1-2. 1.5 to 1.8  
in the

~~all~~ - the Heath.

Very dense Heath

Plant Greeneries

No 7, 8, 9 Sedgwick

plant growing in swampy  
patch by roadside

Kent Branch Kentland

15-15 Sitting out now for  
Haywood

15-30 Haywood

B.F.C. 2

Concept of Time Length

- after max. distance  
elapsed. explain after the  
time to point where

Single bird present  
difficulties

Falco bergradi 2 up  
under dark upl.  
16.00 P. or H.

Rept. 11 1/2 (12) gulls  
1700 Riverbank hotel  
dinner, &  
discussion  
on work

June 6<sup>th</sup> Thursday

0700 Up - - cool  
clouded

0830 Departure for Ft. Fanny

Sturnella cyanocephala 2-3, 1, 1,  
Falco bergradi 1 at upl. <sup>dark</sup> upl. <sup>dark</sup>

Eumoterus hyemalis 2+

Cornus milleri. B. or H.  
This sp. has been the  
one fairly consistently  
seen ~~that~~ on all  
parts covered on this



Nov 9. Hypocnemis not on prop. ident 45  
Pseudotsugamitis hibiscus.

Keep up to date. common.

Falco beringianus 1

Anthus trivialis 1

Symnethura hypoleuca 5,  
3, 3, 1, 2, 3, 1, 4

Slavus vulgaris common

throughout open country.

Corvus mell. 1, 1, 1, 1

Holostichus sphenoceros 1

Kabulue roseocarpus 4-5

0900 / Yambuk

Symnethura hypoleuca 1, 1, 1, 3, 3

Kabulue roseocarpus 6

S. hypoleuca 1, 4, 1, 2, 4, 2, 1, 1

Grallina cyanoleuca 1, 2, 2, 2

Cygnus atricapillus flock.

Corvus mell. 2

Falco beringianus 1

Abn front as well 1

Note Symnethura hypoleuca

Taken at Rt Ferry 0925

50 at least noted 5 km

from river not looked for all

the way. Do they

congregate on road?

No birds seen the morning  
0940 Tower Hill Road  
Large temperature -

to get back, looking  
Tunny north to Koroil

0950 Tunny back to  
Warrumbungle -

Country mostly flat  
dry grassy land -  
wood break clumps.  
Little native timber.

as seen looking north  
from Tower Hill Road  
to Koroil

Also encephalitis,

1000 Northwesterly

1110 E. Westerly

Photos 3-4

Open grassland  
grazing land  
with some small trees

1020 Norwesterly

Now Open Forest - Shrubby  
 1000m - Lush  
 Sun. Oval

Photo 5-6 Open Forest  
 Good with shrubby  
 Shrub layer  
 Masson, Shrub  
 = *Acacia* + *Lophospermum*  
 Shr. - 10ft. Trees - 50ft

Photo 778 ~~Open~~ Open Forest

Young - *Masson*  
<sup>12-18</sup> A <sup>3</sup> B <sup>5-1</sup> C  
 A = *Masson* young  
 B = *Acacia*, *Boerhaavia* *obovata*  
 C = *Quercus*, *Brodiaea*

What will distinguish  
 Wet Selar. from Dry Selar  
 both large density -  
 more than 1000 L  
 floristics  
 exist wet = more  
 but not how

Anomalous  
hard open

48 Photos 9-10

~~Tall~~ Open forest.

(almost wet sedge.)

~~B~~ Mesomak ~~mann~~  
Sun.

(Shrub layer, a photos  
7 & 8)

Photos 11-12

Tall Open Forest cloud  
Mann Sun  
Gull  
open  
forest

A<sup>25</sup> A<sup>10</sup> B<sup>1-3</sup> C<sup>15</sup>  
y z y y

A<sup>25</sup> = Mann

A<sup>10</sup> = Blackwood

B<sup>1-3</sup> = Giraia  
Beach

C = grassy herbs

---

Exakta Photos 7 & 8 Same  
shot as photos 11-12 above

Exakta Photos 9-10

Canalor close by

Exakta Photos 11-12

Sunny - 11-12 Tall open forest

---

# Mimosa Court

Photos 13-14 Same  
 gently as Exakta 11-12.  
 Tall open Forest  
 with lower layer -  
 (~~R. ekebergii~~), Blackwood  
 Leptospermum

11:05 Turned north toward  
 Terang

Photos 15-16

Planted Tree Larnah  
 Pini

11:20 Terang

Leaving off to north

Heath is mostly scrub -  
 would come in sublimation  
 to scrub.

11:30 North

Some ~~plants~~ <sup>walls/fences</sup> appearing  
 for forest land.  
 Very fine example -

*F. cuneata* 1

*F. benigna* 1

*Rhyacionia cuneata* 1

March 12 - 11.40

Not Sugar Gum plantation  
— assumed character of  
closed forest

Photos 17-18

Sugar Gum wind  
break nearby

Open Forest patches

< but what to call it

It is a sample of non-  
planted vegetation which  
has the structure of open  
forest. - it is regarded as  
a sample of a - part of  
a theoretical continuum  
- the whole would be  
"forest"

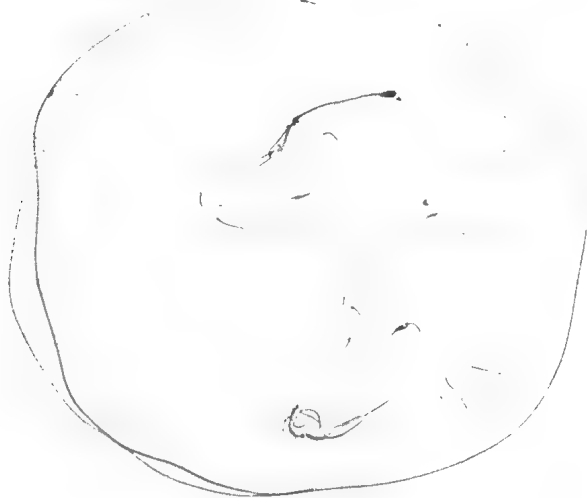
11.50 Harker



5

B F C S / cote 5  
 Kinkadee gully pick  
 Halphayn penicillin 14  
 Maleside 1

Round print at Naraib  
 Naraib.



Dear Friends  
 I am very sorry to  
 hear from the  
 Original Record  
 by the late P. J.  
 Bateman in the



Possession of the  
Publishing.

[Presumably 19th or  
Landowner with  
slightly sentimental  
modification but having  
appearing,  
Rune edge of print

= London Public

Jan 1850 by Lloyd,  
Brothers & Co

22 Ludgate Hill

11.30 Depart with for  
Chesham

Plants <sup>19-20</sup> ~~18~~ Part from  
Tree Savannah ~~Woodland~~

Part from Monmouth

NO. 5

54 Began Monoliths Nov

Monolith Film Nov

Photos 1 & 2

~~Spent~~ Enrichment

(Grazing time)

but with trees... ca

max chat for

Tare Samonah.

Photos 3 & 4

Open Monolith -

couple, bark in

Casuarina stand

a few <sup>Bills</sup> <sup>Wash</sup>

but note, clear

litter, dead trees

This dead stuff

important for

problem.

Photos 5 & 6 chills

Note also litter

more dying

11 chills want

11 total ham for cloudy

1700 Glenkemp  
 Beautiful Ser. woods  
 Red Sun

Faded butterfly very  
 pale here,  
 Beautiful Red Sun Ser  
 woods

1705 Dunblaw

1730 Hamilton  
 Botanical Flag Model -

20:45 Summary of  
Progress & Ideas

This field research  
 carried out in this po-  
 region to this point  
 has, we feel, already  
 proved to be satisfying  
 and successful.

The progress, we  
 think, can be summarized

as follows :-

1. We are optimistic that the aim of the project is feasible, worthwhile and capable of being achieved.
2. The system put forward by Spick expressing density as a basic criterion provides it seems the best and most workable method and is one we find very valuable and acceptable as a fundamental rule.
3. The chief points calling for further attention are :-
  - (a) the need for expression of "Sovereignty" and especially for representation of "Sovereignty"

- (b) the idea of <sup>the</sup> vegetation type as a sample of <sup>the</sup> minimum size required to contain all ~~for~~ elements of the vegetation type in question.
- (c) the idea of the visual limits to the view of the veg. type sample and the sample as a sample of a continuum
- (d) the separate idea of the particular veg. type as a distinct unit within the larger framework of the countryside in general.
- (e) the various separate and incidental aspects mentioned in various parts of these notes.

June 2<sup>nd</sup> Friday

0715 Wp. - cool cloudy  
afternoon

0830 Depart for Sengmany

- pickup first 10 Gall

0845 Towards Dambud

Spurred flowers 2

Photos 7 & 8 Gressland

Alauda arvensis

Sengmany

F. beryllina 12 photos

Photos 9 & 10 Red Gum  
Sav. Woodland

Photos 11 ~~12~~ Red Gum  
Sav. Woodland

Photo 12 Sp shot Red Gum  
Sav. Woodland

Kerkela parvirostris  
Flower

Photos 13 & 14 Red Sun  
Lev Woodward

Photos 15 & 16 Red Sun Lev  
Woodward

{ Exakta Photos 13 & 14 } Red Sun  
{ Exakta Photos 15 & 16 } Lev Woodward

Dumbolt 0930 1/2 mile  
further on.

0945 Depart Dumbolt towards  
our road side plicaria Range  
Mt Shugan at foot range  
then Mt O'Connell

Calluna vulgaris L. L. L. L. L.

Grossularia

Photos 17 & 18

Low Healthy Woodward

Br Stungunbank

Ab = 2000 ft  
A<sub>2</sub> B<sub>2</sub> C<sub>1</sub> X B<sub>2</sub> = young arch  
a. 1000 ft  
C<sub>1</sub> = healthy  
"Heath" 500 ft. 1000 ft. 1000 ft.

60  
Photos 19-20  
Further shots  
how healthy Woodlark

Photos 21-22  
~~Upper~~ Woodland  
Note 2 parallel. appears  
like forest but  
from inside looking  
up the canopy cover  
is clearly only up to  
30% - close but  
perhaps not ~~not~~  
generally not more  
than that in woodlands

<sup>15</sup>  
A<sub>2</sub> C<sub>22</sub> Lr<sub>2</sub> x

A<sup>15</sup> = Manuaa En

C = grass + herbs

Lr = litter - leaves + twigs



Photos 23-24

Foreground & the vegetation  
to show density of  
tree holes with  
even though canopy  
over

Photos 25-26

looking up ← show  
openness.

Photos 27-28

(~~leaves~~) healthy woodlands

A<sup>10</sup> 2 B<sub>22</sub> ~~1.5-1.5~~ 1.5 1.5 B<sub>x</sub> C<sub>x</sub><sup>.5</sup>

A<sup>10</sup> Bracken & moss in

B<sub>x</sub> Int ~ ~ plus Lycopodium  
Caulis. etc

b. 1.5-1.5 Heath Xanthoxylum  
small acacia  
& other woody shrubs

c. 5 = Hebe, grasses etc

Photos 29-30

Lev. encalypt - woodland  
form (Abies)

~~the~~ clump-like  
called ~~not~~ for woodlands?

Photos 31-32

Shrubby woodland

Loose Sun +

Leptospermum dense  
shrubby.

Growing dense  
shrubs (leafy)

10.45 Crossing Wannon Rd

Photos 33-34

low shrubby woodland  
Populus

A<sup>4</sup> B<sup>2</sup> B<sup>1</sup> C<sup>5</sup>  
A<sub>2</sub> B<sub>y</sub> B<sub>x</sub> C<sub>x</sub>

A<sub>6</sub> - Populus

B<sub>2</sub> Leptospermum

B<sub>1</sub> Xanthorrhoea  
Healing herb  
Bush-like herbs

End Film NO 6 Minolta  
Begin Minolta NO 7

63

Photos 35, Two shots  
Photos 36 & Lizard

Open Forest.

Very on wet Schizophyll  
~~but still wood forest~~  
lot.

Manna Gum  
Blackwood lower large  
Jimmy's Creek Picnic  
Ground.

Begin  
Minolta Film NO 7

Photos 1 & 2

Looking up in photos  
35 & 36. Note not

dense, no more than  
the earlier dry letter  
woodland one.

So what do we call it? S.  
Structure definitely  
includes L forest.

All probably emphasizes  
open that canopy density

seems may be the  
 same sandy part  
 but the Spinctard  
 or form must be  
 taken into account  
 where needed to  
 reach a decision

Photos 3 + 4  
 Low Shrubby Woodland  
 Peppermint 4-5 inches

11.40 Passing Lake Bellpuke  
 on right

12.00 Horro's Gap

13.00 ~~many~~ <sup>very</sup> ~~thick~~ <sup>thick</sup>  
 lunch - towards

Mount Cook

Photos 5 + 6

Elephant's head

Rock face vegetation

and Horro's Gap



66

→ Charming lake place  
bordered by evergreen  
young trees & forest  
ground from

McKenzie Falls - spruce  
B. 50

Erly Kangaroo -  
mob.

Streptopelia

Several Note at Hall's

2000 - 4000  
rough white on wing  
blend head and  
apical band  
but distinctly diff. -  
none checked for  
N.E. birds

Photos 13. 14

Woad

Yellow Box yellow  
long leaves  
Box. Litter &  
growing. 5.

Eastman 7.

85

Some more. Find  
low strata with structure  
of Litter Y-Z.

Photos 15-16

Red Gum Woodland

Photos 17-18 woodland

Be Shrubland with  
heavy litter layer

Trees 30 feet - probably  
no same layer -  
much with grass and

16-18 and 19-20

Photos 19-20

Red Gum Tree Savanna

End of the film

Bequey Minolta Film &  
Photos 1-5

Some woodland

Shrubland

where ~~open~~ fields, rocks  
are present become Reddy  
woodland, Red woodland or mixed woodland

Perhaps Swamp Woodhewers  
 when only water  
 Ruddy Swamp Woodhewers  
 when birds present.

1500 Horseshoe  
 Casuarina ~~grove~~  
 near Kemperia -  
 Birds take.

15-30 Dumbarton  
~~Depart~~ for Dumbarton  
 Chapter

Winn, & Hensen

June 8<sup>th</sup> Sat.

0830 1/2

0945 Depart.  
 Rebut 7 gals.


2000 Depart Dumbarton  
 for Melbourne



Arrival 11:40 Cold  
windy.

~~Baccharis~~

Ballroom 1400 Lunch  
10:30 ~~Baccharis~~ <sup>Retreat</sup>

- Note Rock face or cliff  
ring. I have always  
held that the angle of  
the plane on which  
they grow (eg. )  
does not otherwise  
vary by category. - but  
this has been based on  
specimens from the same  
intensity - now that  
coverage is second  
base on the change  
changes because  
coverage obviously  
is not the same here,  
where angle is very steep, so it  
would be thought that  
it is still ?? - think on  
this

Trip to Hamilton/Haven  
for address on  
John Gault &  
29<sup>th</sup> Cent Lithograph

May 12<sup>th</sup> 1982.

11.30 Arrived  
Shawville - stayed  
Voyager with more  
offer ~~be~~  
with ~~at~~ home.

13.40 Group to the Ballroom  
for excellent evening  
meal

17.30 Lakeside Fing  
Hotel Hamilton  
The day has been  
overcast - with  
increasing low  
foggy clouds &  
some steady  
showers.

May 13 Thurs

O'pos up.

20:15 Depart KWH  
Cool cloudy

arrived Kilmuir

ca 1705.

discussed  
with McDonald  
after tea -

28/20 - let out

with John &  
Geraldine McDonald  
for Hamilton

2000 plus gave  
address John  
Spink & the

19th and  
Lithograph "

handwritten  
~~about~~ 30 plus

72

Successful  
New boat & Kolumer

May 14 & Frid

Day spent at  
Navarro - To Innapul  
to see Bishop  
amongst paddock  
during morning  
Thence to School  
New boat &  
Kolumer for  
lunch  
Thence to route  
paddock -  
Timber - Road  
Sun open &  
faced road  
Still very pleasant

- beautiful habitat.

One or two rabbit  
seen - ~~Some~~  
~~songs~~ ~~Some~~ -  
cuckoo, still  
maria.

many mappies  
present

2600 + Deputy  
Kulmuis  
arrives Hamilton  
ca 1200

TO Lakeside  
Hotel.

May 11th Sat  
Fine clear

Deputy 1000 - 11.00

13-30 lunch for Der. T. & all

74

1700 Ann Vahyke

---













- A Shady pine land  
in the ~~foreman~~ <sup>foreman</sup> ~~man~~ <sup>man</sup>  
by S. D. Libbey  
Soul Con. Ark.  
1967.

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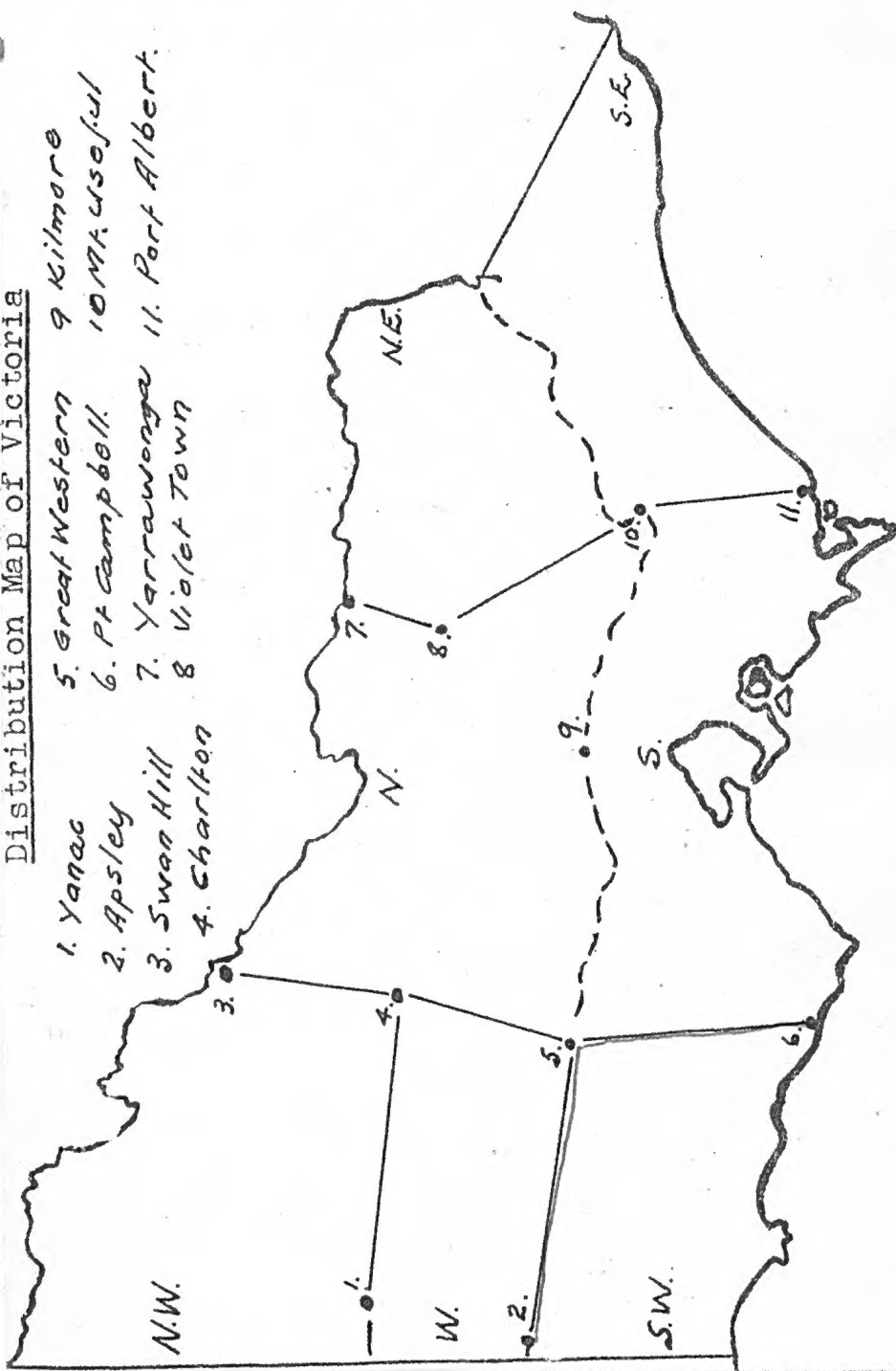
w/ 2.

- 2- straps 22.

# Distribution Map of Victoria

1. Yanac
2. Apsley
3. Swan Hill
4. Charlton

5. Great Western
6. Pt Campbell
7. Yarrawonga
8. Violet Town
9. Kilmore
10. M.A. useful
11. Port Albert



June 3 1880

Life Form and Height of Tallest Stratum*	X Dense X X X = (70-100%) = X X	Mid Dense (30-70%) = X	Sparse (10-30%) = Z	Very Sparse† ZZ = (< 10%)
Trees† > 30 m Trees† 10-30 m Trees† 5-10 m	Tall closed-forest* Closed-forest* Low closed-forest*	Tall open-forest Open-forest Low open-forest	Tall woodland§ Woodland Low woodland	Tall open-woodland§ Open-woodland§ Low open-woodland
Shrubs† 2-8 m Shrubs† 0-2 m	Closed-scrub Closed-heath	Open-scrub Open-heath	Tall shrubland Low shrubland	Tall open-shrubland Low open-shrubland§
Hummock grasses 0-2 m	—	—	Hummock grassland	Open hummock grass-land§
Herbs (incl. moss, ferns, hemi-cryptophytes, geophytes, therophytes, hydrophytes, helophytes)	Closed-herbland¶ Closed-tussock grassland Closed-grassland Closed-herbfield Closed-sedgeland Closed-fernland Closed-mossland	Herbland¶ Tussock grassland Grassland Herbfield Sedgeland Fernland Mossland	Open-herbland¶ Open-tussock grassland Open-grassland Open-herbfield Open-sedgeland Open-fernland§ Open-mossland§	— — — — — — —

\* Isolated trees (emergents) may project from the canopy of some communities (Richards, Tansley, and Watt, *Imp. For. Inst. Pap.* No. 19, 1939, 6). In some closed-forests, emergent *Araucaria*, *Acacia*, or *Eucalyptus* species may be so frequent that the resultant structural form may be classified better as an open forest.

† Some ecologists prefer to ignore scattered trees and shrubs, equivalent to emergents in a predominantly grassland, heath, or shrubland formation.

‡ A tree is defined as a woody plant more than 5 m tall, usually with a single stem. A shrub is a woody plant less than 8 m tall, frequently with many stems arising at or near the base (slightly modified from Beadle and Costin, *Proc. Linn. Soc. N.S.W.* 77, 1952, 61).

§ These formations are rare in Australia.

¶ Appropriate names for the community will depend on the nature of the dominant herb.



Form	Density of Tailed very Dense (v.d.) ( $<$ dia. canopy)	Dense (d.) ( $<$ twice dia. canopy)	Spration Mid-dense (m.d.) ( $>$ twice dia. canopy)	Open (o.)
$TS_1S_2$	Rain forest T { Multistoreyed—tropical and temperate rain forest Unistoreyed—depauperate rain forest	Sclerophyll forest S { Sclerophyllous—dry sclerophyll forest Partly mesomorphic—wet sclerophyll forest	— [Form & Sub forms y kg station - woods]	—
$T/S_1S_2$	—	Sclerophyll shrub woodland T { Single-stemmed—tall and low sclerophyll shrub woodland Multistemmed—mallee	—	Tree heath
$S_2$	—	Heath	—	—
$TG$	—	Grassy forest	Woodland T { Mid-dense—tall and low wood-land More open—savannah wood-land	Tree savannah
$TS_1S_2G$	—	Layered forest	Layered woodland	—
$T/S_1S_2G$	—	Low layered forest	Low layered woodland	Shrub savannah
$S_2G$	—	—	Shrub steppe	—
G (grasses) (forbs)	—	Continuous grassland Herbfield	Tussock grassland	Hummock grassland

\* T, trees;  $S_1$ , tall shrubs;  $S_2$ , low shrubs; G, herbs. For further details and explanations see p. 68.

